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Protection of Chionobas semidea.

By SIDNEY C. CARPENTER.

I have read somewhere, but do not remember where at present, that *Chionobas semidea*, the White Mountain butterfly, is being exterminated by too much collecting. Now why can't this species be protected by law? It may seem novel to have butterflies under the protection of the law, but why should it? Of course a great many natural objects are protected for economical reasons: game, that the supply for market may not be exhausted; some birds, that they, in turn, may protect our vegetation from insects; forests, that the rain supply may not be interferred with; but a large number are protected for their own sake. Among these are: the game in Yellowstone National Park; the sea-lions on Seal Rocks, San Francisco; the big trees in California, and the Palisades on the Hudson River.

Why are the wild animals protected in Yellowstone Park? Not that they may be available for hunting at some future time, but that they may have at least one place in this great country where they may live and multiply in peace. Why are the Palisades and big trees protected? Simply that they may

remain in all their natural beauty. In the same way the sea-lions are kept as an attractive feature of the harbor.

If, as is supposed, *semidea* is a remnant of the Arctic fauna of the ice age, it is fully as interesting, in its way, as the big trees or Palisades, and is as much entitled to protection as they are.

Of course there is a demand for *semidea* among collectors, but can't the demand be met without exterminating the species? I think it can. Collectors who work at the White Mountains can do a good deal towards preserving the species by careful collecting. Although I think no true collector would do, some collectors (?) are fond of getting every butterfly in sight if they can, and it is from such as these that I would have the species protected by law. If certain sections, in which the food plant is abundant, could be set apart as places in which *all* collecting is illegal, a good deal would be done towards the desired end.

What does some one else think about protecting our little colony of Arctic exiles?

Prosopis Ziziae.

By JOHN H. LOVELL.

In the March number of Ent. NEWS, Mr. Robertson states that the name *Prosopis ziziæ* Robt. is incorrect, and that it should read *P. ziziæ* Ckll. He writes, "I have not described any species under the name *P. ziziæ*, and have never used that name." But in the *Can. Ent.*, May, 1896, p. 136, after giving the characters of *P. affinis* Sm., he says, "I think that there is no question but that this is the *P. affinis* of Smith, but the male described by him probably does not belong to it. If, however, this should prove to be distinct from *P. affinis*, the name *Prosopis ziziæ* is proposed for it." Mr. Robertson was, then, the first to write and the first to publish the name *Prosopis ziziæ*. As the name is not required it certainly would have been better had it never been proposed.

In the *Entomologist*, Prof. Cockerell writes: "*P. affinis* Smith, and *P. modesta* Say. Mr. Robertson formerly published

the opinion that these were identical. I found I had two species from the Eastern U. S. to which I applied these names, and accordingly wrote to him about the matter. He replied that he also had arrived at the conclusion that there were two species concerned, and shortly afterwards he published the distinctive characters in *Can. Ent.*, May, 1896. His two species are the same as mine, but what he calls *affinis* I had called *modesta*, and vice versa." After referring to the poorness of the descriptions and the difficulty of identifiying the species, he adds: "Mr. Robertson, feeling this, goes so far as to propose the alternative name *ziziæ* for the proposed *affinis*, and until we can have a better description of the latter, from Smith's type, it will be preferable, I think, to call the insect *ziziæ* Rob." The name "*Prosopis ziziæ* Rob." occurs several times in Prof. Cockerell's papers, and the author of the list of the Hymenoptera of New Jersey under *Prosopis* also writes, "*Prosopis ziziæ* Robt."

I do not think much importance is to be attached to attempts to identify the supposed males of *affinis* and *modesta* in Smith's and Say's descriptions.

Over the Range in a Wagon.

By Prof. and Mrs. A. J. Snyder.

(Continued from page 147, Vol. XII.)

On Monday we passed over the Gores range after a hard struggle and after we had exhausted our persuasive powers upon old Bay and Gray a number of times. The upper portion of this range is covered with heavy pine timber, and no doubt there is an abundance of game back from the road. Two young men who followed us and camped one night here had a shot at an elk, but the only game we saw was now and then a saucy pine squirrel. On the summit we found a perfect flower garden and butterflies abundant especially *Argynnis*. We hoped to find equally good collection on beyond, so foolishly only stopped here a short time, during which sixty-nine butterflies were taken. As we descended the range we entered a beautiful small park and early went into camp beside a spring of

excellent water. All the hill sides were covered at the tops with pines, and at the lower edges of these pine covered ridges were many flowers. Beautiful purple tinted columbines, sego lilies, vetches, sedum and several species of Compositæ. Here too there were butterflies until the approach of evening drove them to shelter.

The next day we made a long drive through Toponas, a country post-office, and on to Yampa, where the pasturage was so short that we had to hire it for our horses and turn them into the corall, or frequently change their staking ground. The day's journey was through the usual sage brush and marked by the absence of game or insects. In the midst of a small bunch of sage I found a huge cricket which looked so ferocious and snapped so viciously that one hesitated to touch it. Buffalo skulls were seen occasionally, but all good horns had been collected long ago. In several moist places were beautiful beds of the fringed gentian, and occasionally along the road would be seen a few blossoms of another species. The western red tailed hawk was common but wary. One of the characteristic birds of this section of Colorado is the sage thrasher.

At Yampa we were again camped near an excellent trout stream and Will caught nine the first evening. The next day we both tried our hands at the sport and secured a fine string of the speckled beauties, all that we could eat. Here we also restocked our provision boxes and inquired for big game. About the yard in which we camped was a fence some sixty or more yards long made entirely of old elk antlers. To the left in the distance could be seen the Flat Top mountains, the home of elk and deer. In this section it was the usual thing to see near each ranch a meat house. A house built eight or more feet above the ground, and looking much like a large squirrel or dove house. This little house is enclosed with wire netting to keep away the flies, and within it the meat is hung exposed to the air. In that dry atmosphere meat will keep almost indefinitely.

After leaving Yampa, we felt that we were indeed striking into the wilderness. Our instructions carried us to a certain ranch, and from thence we were to take our course entirely by

keeping to the right or left of certain mountains or by following streams. After a day's drive of the usual up and down hill nature, we came to Trout Creek and decided to camp here, for a mountain rose before us too steep for a tired team. Several parties were in camp near here, and as every one we saw carried a rifle, we felt that at last we must be in a game region. Even here, we were near a ranch. It seems impossible in these days to get entirely away from the haunts of man, at least with a wagon. By using pack horses it is easy to reach points of such dense solitude that the most selfish recluse should be satisfied, but wherever a wagon can go the squatter may be found living an out-door life, and finding all that he needs for existence either through the aid of plow, pick or rifle.

The following morning, after desperate persuasion of old Gray, we slowly crawled up the mountain side, past two fern thickets—the first we saw in Colorado—and about 10 o'clock came to a fine spring, in whose neighborhood we were told deer abounded. Here we found a Mr. Green, of Canon City, Col., and his son Oscar in camp.

That morning Oscar had seen fourteen deer. Butterflies and even tents were forgotten, the forty-five -ninety taken from its case, and soon we were scouring the mountains back of camp where deer tracks were so abundant that it looked as though a large drove of sheep had been feeding. All the deer, however, had taken to cover, and not until we had given up the chase and were approaching camp had we a sight of one. On coming to the top of a ridge we saw a large one running through the valley some four hundred yards below, and both opened fire, but the deer escaped.

THE "BUGOLOGIST'S" DEER STORY.

"Next morning, before daylight, I was up and starting through the wet grass (it had rained during the night) in search of a deer. One was found within two hundred yards of camp, but it stood so still that I could not be sure it was a deer until it gave one jump and was out of sight in the timber. Less than half a mile from camp another, a two year old buck, was found on the top of the ridge and offered an excellent shot

at about one hundred and fifty yards. As the rifle cracked the deer jumped into the air and ran. On going to the spot no sign of deer or blood could be found, but I soon found its trail and had followed it but a few feet when the deer jumped from the brush almost under my feet, giving me for an instant a decided fright. It was so badly wounded that it went but a short distance and fell. It was necessary to shoot it again. By 7 o'clock we had our deer in camp and dressed. Our thirst for blood was somewhat satisfied with this killing. But two days later I again took a ramble through the ridges back of camp and shot a second deer. This gave us all the venison we could possibly use, and as we learned later was all the deer the law allows one to kill in one season in Colorado. A couple of days later, Will saw a buck with six or seven prongs, and we made some effort to find and kill this fellow, but he was too wary. While looking for this monarch of the forest I came up on one side of a log, and a fawn about a year old jumbed up on the other side and ran about fifty yards, then turned and gazed at me in wonder. It afforded a beautifui shot, but was too pretty a picture to mar with blood, so the rifle was not raised. During the same morning a number of does were started and could easily have been killed, but we needed no meat, and were not of the number who kill for sport alone. It seems remarkable that the deer should have remained in this region, although Will had been firing the shot gun at birds aimost continually, and I have taken the time of entomologists to tell of my first deer, not only because of its interest to me, but because the story proves that there are yet places in the United States where the deer are abundant, more abundant than I had supposed them anywhere outside of Yellowstone Park." Within a day's ride of this spot, in the Flat Top Mountains, elk are still abundant, but we had traveled far enough, had accomplished all and more than we anticipated in the way of game and, moreover, there was a miserable mountain to be crossed if we continued the journey, so we made this the turning point, and after a week in camp here started home.

Although several trips were made for insects nothing of value was found here except two *Catocala groteiana*, a few *Euprepia utahensis* and one *Pseudohazis nuttallii*.

Thistles were abundant in many places, and about these were dozens of humming birds. A burrowing mole was abundant about camp, and several were shot by watching for them and shooting them when they came up to throw out the dirt, and Will secured some good birds. Beetles we searched for diligently under stones and old bark but they were not there. *Pieris pallida* came about the spring and an occasional *Grapta*. A few common species were found on lower ground along the stream, but everywhere it was too dry and too late. Two evenings were spent in smoking our jerked venison, and then one morning we took a farewell glance at Eagle Point, which had been our land mark in all our ramblings near this camp, and realized that we were homeward bound. On our way to Yampa we stopped at noon for an hour's collecting, where *Pamphilia* and *Argynnis* were attracted to certain Compositæ growing in abundance in a little draw, and at Yampa, where we spent another Sunday, we tried sugaring, and actually caught several *Catocala*. On top of the Gores range where the flowers had been so abundant, we camped for an afternoon and night, and collected and sugared again. Argynnids were abundant, and a few very dark *Graptas* were taken. At sugar a few geometrids were taken, but no *Catocala*—too high we thought and too cool at night.

The bird fauna had changed remarkably since the outward journey. During all the going we had seen no butcher birds, but returning saw and shot a number. We imagined that they were beginning to migrate. Hawks were abundant and a number of large ones were killed, and among them several varieties of one species, Swainson's hawk, I believe, being the most common. On the Gores range we were just ahead of a forest fire which some careless camper had started, and whose smoke darkened the sky during all of one day. Vast quantities of pine timber are destroyed every year by these fires, although rangers are continually riding back and forth through the forest reserves, and there are heavy penalties attached to leaving unextinguished camp fires.

At the western base of the main range we camped one night, and again attempted sugaring. Result one *Catocala* and a few

more of the same species of geometer. The hurrah with which we reached the summit of Berthoud Pass, was hardly less hearty than the one with which we greeted it going up from the other side. We camped two days on the summit and collected on Mt. Flora which rises several hundred feet above the pass. Snow still abounded here, and at the edge of the snow banks we found *Colias meadii*. Just below the summit *Parnassius smintheus*, var. *nanus* was common, and at the timber line *Lycæna rustica* was abundant. In the timber *Arg. helena* was thick upon the flower patches, and an occasional *Colias eurytheme*, and one or two *meadii* were also found here. An almost white *Colias* (*scudderi* ♀) was also found, but not in abundance. One day we came down from the summit and had just reached the timber line as the sun went under a cloud. On coming to a large patch of flowers we found *Arg. helena* and a species of noctuid resting on the flowers. The Argynnids with their wings folded back to back as though asleep. Without using the net we soon tumbled these species into the bottle until it was full. At this point we completed our first thousand insects collected, and only two hundred more were taken, making 1200, or the smallest catch I have ever had in the Rockies. All because we were too late, and the weather was too dry.

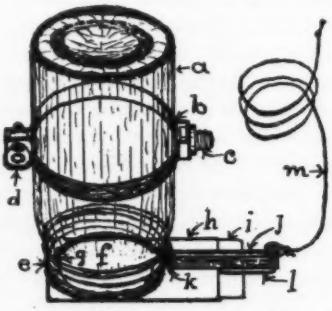
About Idaho Springs we found several species that were not seen on the outward trip. On Floyd's Hill we stuck fast and no amount of persuading or unloading could persuade old Gray to go up. At last a good Samaritan came along and helped us over the summit with his team, and because of his goodness we were able to disappoint our enemies and greet home and native land again. All was easy from this point on. We stopped again at our friend's residence, burned the remnants of our outing clothes, scrubbed ourselves diligently and replaced everything for the journey home. Our horses which had served us so faithfully, in spite of old Gray's eccentricities, were taken to the stock yards in Denver, and it was with delight that we were able to sell old Gray to one party, and see the faithful Bay go into the hands of an owner who promised to treat her well and not disgrace her by compelling her to work with such an old shirk as the one whom we had compelled her to labor.

Over three hundred bird and mammal skins, twelve hundred butterflies, a few beetles, all the game and fish we could eat, hearty out-door life and pure air we had enjoyed for more than seven weeks, and a closer contact with nature than had ever fallen to our lot, and all for a reasonable expenditure of money. Our appetites were enormous, our health good, and moreover there is nothing equal to the pleasure of getting home and living in a house once more. As our friends had said, "The memories of that trip will always be with us and we have little to regret." May all who hear this crude account some day, sometime, have an equally enjoyable trip.

A New Device.

Useful for taking Moths from Tree Trunks, Fences, etc., or from the Ground without using the Net.

By F. A. MERRICK, New Brighton, Pa.



a. A pint Mason fruit jar.
b. Clamp for holding jar.
c. Threaded spud to fit net handle.
d. Thumbscrew to clamp jar firmly.
e. Metal screw top of Mason jar.
f. Opening cut through lid full size of jar opening.
g. Stop to prevent slide pulling out of frame.
h. Frame soldered to top of lid.
i. Slide door to close jar when insect is in.
j. Rubber band (½ in. o. o. o.) spring to close slide.
k. Pin soldered to lid to hold end of spring.
l. Pin (bent wire nail) soldered to slide door to hold other end of rubber band.
m String for opening slide door.

The above cut shows very clearly an arrangement for an automatic closing lid for cyanide jar, also clamp for attaching jar to net handle. As I use the pint Mason jar exclusively for my cyanide jar, and use the M. Abbot Fraser net frame and jointed handle, I, of course, made it to suit these things—but a socket in place of threaded bolt at "C" would receive any cane or stick of any kind, and in place of the screw lid for a Mason

jar the frame and slide door can be soldered to any tin lid to slip *tightly* over or into any kind of a jar, so that any collector, by slight modifications, can adapt it to his favorite jar and net handle.

To use this device I simply remove the net from the handle and replace it with the clamp "b," insert one of my cyanide bottles and clamp it tightly by turning thumbscrew "d," then put on my lid and it is ready for use. Holding my net handle close to the end with my right hand, with my left I pull the string until the slide door is wide open; (the stop "g" prevents it being pulled entirely out of the slide); then I slip the string between the first finger of the right hand, and, the net handle pressing firmly on it, this holds the trap open until I have placed the mouth of the jar over his "mothship," and as soon as he flies out into the jar release the string and the lid will slide up and imprison him.

I used this with the most gratifying results last summer, not only on those that were too high to reach with bottle in hand, for which I had designed it, but equally desirable for those near the ground or *on* the ground, as, being enabled to remain several feet from them, I had no trouble in capturing the most wary, even in the hottest days. For Catocalæ I consider it *invaluable*, and extremely desirable for all Heterocera.

Should any of the readers of this have any difficulty in getting one made from this cut and description I shall be glad to give any further details on application, only please do not ask me to make them for you, as bugs are here and I am busy. A tinner can make you one.

On a Small Collection of Butterflies made in California and Arizona.

By Henry Skinner, M.D.

Prof. Levi W. Mengel of Reading, Penna., very kindly submitted to me for study a small collection of butterflies made by the late Mr. Irvin Runyeon of Reading. Mr. Runyeon made a wagon journey from Redlands, California, eastward into Arizona. His brother, Mr. George Runyeon, gives the fol-

lowing as the route: "He started from Redlands and went directly eastward through the passes of the San Bernardino Mountains; then still eastward through the Mohave Desert to the counties on the extremity of Arizona. He did not go further north than Bill William's Fork River, nor further south than La Paz.* He went about one hundred miles toward the interior and returned almost the same general way."

When I saw this collection I could hardly believe it was made in the United States, as there were so many species new to our list. I do not know how much of an effort Mr. Runyeon made to get Lepidoptera, but do not imagine he worked very hard at collecting as he was an invalid and only collected through his friendship for Prof. Mengel.

This list shows what we may expect in the future, and proves that many more species will be added fron the southwest when the country is carefully collected. No large butterflies were taken, but there were two or three species of common Lycænidæ in poor condition.

LIST.

Eudamus simplicius Stoll.
" *eurycles* Latr.
" *dorantes* Stoll.
" *zilpha* Butl.
" *alcæus* Hew.
" *hippalus* Edw.
Heteropia melon Godm. and Salv.
Erycides amyntas Fabr.
Telegonus hahneli Staud.
Timochares ruptifasciatus Plotz.
Staphylus brennus Mab.
Pholisora catullus Fabr.
Heliopetes laviana Hew.
Hesperia syrichtus Fabr.
Chiomara asychis Cr.
Thanaos tristis Boisd.
" *funeralis* Scud.-Burg.
Butleria microsticta ? Godm.-Salv.
Ancyloxypha arene Edw.
Pamphila phylæus Dru.
" *druryi* Latr.
" *eufala* Edw.
" *nemorum* Bd.

Out of these twenty-three species, eleven are new to our fauna of America north of Mexico. An expert collector could probably make a remarkable catch in this region.

* "La Paz is a small town near the western border of Arizona and near the Colorado River. It is almost midway between the Gila and Bill William's Fork Rivers.

MR. A. G. WEEKS, JR., of Boston, Mass., will describe over eighty new butterflies collected by Mr. W. J. Gerhard in Bolivia. They will be published in various journals and figured by Mr. Weeks.

A New Ascalaphid from the United States.

By NATHAN BANKS.

Our Ascalaphid fauna is not very large at present. There are three species of *Ptynx* from the extreme southern parts, one *Colbopterus*, and two species of *Ulula*; to this last genus I now add a third. No species are at present known from California, so it is quite probable that a few more species will be added to our meagre list.

The new species comes from Arizona, and is closely related to *Ulula hyalina*, but distinct by a number of minor characters.

Ulula albifrons n. sp.

Clypeus and mouth parts yellowish; head clothed with white hair, with which some gray is mixed. Antennæ brown, each joint narrowly tipped with pale; club pale brown, paler on tip, in length the antennæ reach only to the tip of abdomen. Thorax brown, mostly with white hair below, some brown hair above, especially each side of the metascutellum; on each anterior lobe of the thorax there is a pale yellowish spot, a median pale spot on mesoscutellum, and another on the metascutellum. Legs brownish, paler at knees. Abdomen brown, mottled with paler brown, and with black; last segment partly yellowish above. Wings hyaline, pterostigma dark brown; venation black, except the costal margin near base, which is yellowish; ten to twelve cross-veinlets between radial sector and radius before the pterostigma.

Length 20 mm.; expanse 50 mm.

Three specimens from Phœnix, Arizona, (Kunze). The difference between this and the allied *U. hyalina* may be gleaned from the following table of our three species of *Ulula*:

1. Pterostigma yellow, on hind wings several dark clouds near tip. **U. quadripunctata.**
   Pterostigma dark brown, sometimes one dark cloud in hind wings near tip . . . . . 2.
2. Front with white hair, antennæ annulate, reaching to tip of abdomen, venation black, 10 to 12 cross-veins between radius and radial sector, smaller species . . . . . **U. albifrons.**
   Front with dark hair, antennæ not annulate, reaching beyond end of abdomen, venation partly light brown, 15 to 17 cross-veinlets between radius and radial sector, larger species . **U hyalina.**

Anthocharis genutia has been quite plentiful this spring in New Jersey. Mr. Witmer Stone took it at Meford; Messrs. Viereck and Rehn at Riverton; Mr. Erich Daecke at Clementon; Dr. Skinner and Mr. Thomas at Westville, and Mr. W. G. Freedley at Crosswicks.

Letters from Thomas Say to John F. Melsheimer, 1816-1825.—IV.

Philad^{a} April 27th 1817.

Dear Sir

I thank you cordially for the box of Insects you last sent me, they came to hand in the most perfect good order, not a pin was loosed, nor a member broken; some of them I had not in my collection, particularly the Aradus; but what is more important to me is that the insects you send me enables me to identify those of my cabinet with the names in your catalogue, all these names I shall preserve as far as I know them unless the insects to which they are adapted have been described by others under other names in this case the name of the described insect must be of course retained because it is already established & known to entomologists—& unless also your name is applied by other writers, to another insect of the same Genus, in this case too, the name must be changed to avoid confusion—I am very anxious that the vanity that induces many naturalists to change specific names unnecessarily, should be discountenanced, as I am convinced it will be, by every true friend to the interesting science we pursue; for besides introducing much confusion & adding exceedingly to the labour of the study, it is undoubtedly robbing the first describer of his just rights, If the thing is done through ignorance, it is another matter, & the innovator shall then be held guiltless, provided he exerted himself to obtain better information.—Some of the Insects you sent me I had already described under names of my own these names I was very happy to reject, in favour of those of your catalogue to which your numbers referred me——

The Elater Noctilucus emits a permanent light so vivid that I could make out to read large letter press alone—Olivier's figure of this Insect represents it of the same size as ours, that of Phosphoreus about the size of your female *Aterrimus*—Herbst's figure of *Phosphoreus* is much larger than that of Olivier & represents it in length about an inch & a quarter & more than proportionally broad, he says in his description that

from its magnitude he would have taken it for the *Noctilucus*, if De Geer had not given as a distinctive & differential character of the two species, that in Phosphoreus the thoracic spots are visible beneath, a circumstance which combined with its magnitude & "Personne au surplus n'a remarque une dent mousse au milieu du bord inférior du corcelet" will not permit us to consider them as the same, untill we know more about them—According to Humbolt & Bonpland the larva of E. Noctilucus feeds in the Sugar cane—Latreille also considers them as distinct——

The Gymnopleure I sent you under the name of Indicus is perhaps the *Leei* of Fabricius—the insect figured & described by Oliver, which he calls *Fulgidus* is certainly very similar to it, Fab: says it is only a variety It also strongly resembles the sinuatus, fig^{d} by Oliv: but indeed I am not certain of the insect at all it may be Sinuatus at last——

The two insects Nemestrinus & Pithecius in the descriptions given to us of them, bear to each other a strong resemblance. Turton says of both species that the "Elytra are striated" if this be true our insect cannot be either as its elytra, are not properly speaking, striated, as the lines are not at all impressed & but just visible, but this character Fab: omits—For Nemestrinus, Fab: refers to Herbst: Arch: t 43 f 1—This work I have, edited by Fuessly and translated into the French language, his figure is certainly not that of our species for besides many other differences the elytra are represented as strongly & very obviously striated, the thoracic horns also are very different they are placed nearer together & point more horizontally forward, Herbst observes that it is covered beneath & on the feet with red hair—But upon reference to Olivier's fig: & descr (This noble work I have access to through the kindness of a friend) I was at once convinced to a certainty that the Ins: I sent you as *Pithecius* is the *Molossus*—The color of Pithecius is ferruginous & it is much less than our Insect: & Oliv^{s} fig. of Nemestrinus agrees perfectly with Herbst's—Olivier says of Molossus that at the base of the horn of the head on each side is an elevated line "Le corcelet est

coupé anterieurment et muni d'une petite cornu dessous de la corne il y a un petit enfoncement." I also referred to Drury's fig: (Exotic Ins:) which I found much better & more obviously characteristic than that of Olivier—The Ins: I sent you as Molossus comes nearest to Olivier's fig & description of *S. Bucephalus* & so I have named it in my collection.

As to the large Buprestis, specimens of which you sent me with the supposition of its being the B. Mariana, I cannot positively say what species it is referable to, but it is probable I think that it is no other than the Mariana—Fabricius, Syst. Eleut. says it inhabits "Europa boreali" he refers to Drury Vol 1 t 30 & to Herbst: Arch: t 28 f. 4—these two figures differ very much from each other, the latter was designed from the European specimen, & the former from a specimen captured in Virginia, & very probably the difference observable between the two figures, is owing to the little care taken in the drawing or engraving—In Turton's Lin: an insect is described under the name *Virginica* which is doubtless intended for the insect in question, he refers to this same fig. of Drury before mentioned—Fab. Syst. Eleut, omits this specific name (Virginica) no doubt judging it to be the same precisely with the European Mariana—Turton says of Mariana that it Inhabits New Holland & does not give it as an European Insect at all—Olivier on the other hand says it inhabits in all Europe & also in America—So that you will see that the thing is not settled—Paykull. Faun. Suec. gives a description somewhat in detail, agreeing very well with our insect—I have not access to Petiver's Gazoph but that work is not quoted in the Syst: Eleut: under the species Mariana—The sinus in the terminal abdominal segment of the male is indeed remarkably conspicuous, the same conformation occurs though less obviously in some other Insects the only ones which at present occur to me as exhibiting the truth of this remark are the Cicindelæ, in some of the males of which, this structure is perceptible, & the tail of the females in many instances is canaliculated in a similar manner—The specimen you allude to marked *B.* I should suppose is but a variety it is however of a larger size & less

brilliant colour, if they are of frequent occurrence some distinguishing character may perhaps be established——

I am going on with my descriptions of our American Insects, this will be a work totally distinct from my "American Entomology"[1] this last I hope soon to issue the first number of, which has been delayed by unforseen obstacles, which are now completely removed—I find a great many ins: for which I cannot refer to your catalogue, not having received the species of you; & many which are not contained in the catalogue; all these of course I have to name, I mean such as I have not been described; as for instance, I have thirteen species of the Genus Cicindela, there are only seven in your catalogue & of these but five whose names I can preserve the other two, not having received from you I have perhaps described under some other name; & so of others.

I should be very happy to receive from you any insects of your catalogue, that I have not had, & for these I should expect to remunerate you——

Of the two species of *Languria* you sent me one is the Trogosita bicolor of Fabricius & and the other L. mozardi of Latreille. I have found two new genera & perhaps three—one of which I have named . . . . . & the second
the first is remarkable for its large mentum, the anten: are moniliform & the thorax has three raised lines &c—the
is a small insect, one sex of which has two spines upon its very large palpi & the elytra are abbreviated—you shall hear more about them——[2]

I send you descriptions of some of our fresh water & land

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[1] It is to be inferred from this that Say intended to publish these descriptions on lines similar to those of his *American Entomology*, which intention was, however, not consummated. These "descriptions," if of new species, probably appeared in the many articles contributed by Say to the various journals then existing. It is more likely that they were descriptions of known as well as new forms, and were never published.—W. J. F.

[2] These proposed genera were probably never published by Say, as they are omitted from Scudder's *Nomenclator*. It is therefore thought advisable not to include the names here.—W. J. F.

shells, these I made out for an Encyclopedia publishing here & fo which I have undertaken the department of Natural History —since these were published I have found several new species —(It is a small pamphlet & will be sent by the same mail with this letter)

Mr. Le Seueur, the celebrated friend of Peron, a French naturalist no doubt well known by character to you, is about to publish an elegant work on the American Fish, he does every thing himself, draws, engraves, prints & colours, so that it will be got out with the least possible expense, he has already engraved eight plates for it; he intends to have it of the same size as mine[3]—Prof. Barton, nephew of the late Prof. B. S. Barton intends to publish a work on the plants of North America with coloured plates,—

"A general System of Nature through the three grand kingdoms of Animals, vegetables & minerals" &c "translated from Gmelin's last Edition of the celebrated Systema Naturæ by Sir Charles Linné—amended & enlarged by the improvements & discoveries of later naturalists & societies with appropriate Copperplates by William Turton, M.D." it is in Six volumes octavo & the last set which has been rec^{d} from England was imported by a friend of mine for his own use, it cost him five Dollars each volume it is a work of little repute in England, & rarely quoted by Entomologists The "Transactions of Linnaean Society of London" are now in Eleven volumes—One volume is published each year & costs about one hundred dollars for the whole Eleven volumes

I would thank you to let me know of any European Works in which any of our American Insects are described I am determined to get them all if possible for I cannot well do without them. I would be liable to describe as new, Insects well known & and long since described in Europe

With the highest respect
I remain your most Obdt Servt
Thomas Say

[3] This intended work does not seem to have been published, as it is omitted from bibliography—W. J. F.

Contributions to the Odonata of Maine.—IV.

By (the late) F. L. HARVEY, Orono, Me.*

(Continued from ENT. NEWS., Vol. IX, Nos. 3 and 4, 1898).

Species in this article reported for the first time by me are numbered from 67 to 82. Those below 67 refer to species first reported in ENT. NEWS, Vol. II, Nos. 3 and 4, 1891; Vol. III, Nos. 4 and 5, 1892, and Vol. IX, Nos. 3 and 4, 1898. Fourteen species new to Penobscot water are recorded, making the species known to occur in the Penobscot Valley 82. The number of species known to the writer to occur in Maine is 93. We have added full descriptions of some of the rarer species, thinking they will be acceptable to entomologists. We have taken pains to give exact data, recording localities for rare species so that in the future others may know where to look for them.

The remarkable finds are *Enallagma geminatum*, *Ophiogomphus carolus*, the females of *Ophiogomphus anomalus* and an abundance of males; *Ophiogomphus asperus*, *Ophiogomphus johannus*, an abundance of the males of *Gomphus scudderi*; *Neurocordulia Yamaskanensis* and *Somatochlora septentrionalis* new to the United States; *Celithemis ornata* taken inland, and *Leucorhinia frigida* and *glacialis*, both rare species.

Subfamily CALOPTERYGINÆ.

1. **Calopteryx maculata** Beauv.

A single male on Russell Stream, N. E. Carry, August 27th, 1899 (Harvey).

54. **Hetærina americana** Fabr.

A single male along a swift flowing brook, July, 1898, Auburn (E. D. Merrill); many of both sexes, 1898, Winslow (C. F. Hitchings); Chemo Mills, Sept. 13, 1899 (Harvey). Prof. Hitchings has reared this species and has the nymphs. Our specimens were taken from rocks in swift water.

* The last letter from Prof. Harvey received by me, written a very few days before his death, accompanied the manuscript of this article, and contained this request: "Please make the best you can of this for me." I have carefully compared the various sheets sent to me, some being in duplicate—with the present result. A few supplementary notes of my own are enclosed in square brackets [].—P. P. Calvert.

Subfamily AGRIONINÆ

60. **Lestes congener** Hagen.

Orono, Me., July 29, 1899 (Harvey). Over small pond in pasture. Abundant.

3. **Argia violacea** Hagen.

Chemo Stream, Sept. 13, 1899 (Harvey). Several specimens seen. A very late date for this region.

58. **Erythromma conditum** Hagen.

A single male taken at Vinal Brook, Orono, Me., July 3, 1899, has the abdomen fully 30 mm. long. This specimen has on the dorsum of the abdominal segments 8 and 9 a narrow median black line, which extends on 8 about seven-eighths the length, and on 9 about two-thirds the length; also on 8 and 9 on each side of these median lines, near the end, is a small round dot. These markings are not mentioned in descriptions of this species and should be recorded. We have not examined a large series and these marks may be normal. The books say '8 and 9 blue.'

8. **Enallagma hageni** Walsh.

The coloration of this species is quite variable. Specimens taken at the same locality and the same dates, and having undoubted appendages of this species, varied as follows in the color of the abdomen: (*a*) Apical fourth of 3–5, more than half of 6, whole of 7 and 10, black. (*b*) Apical third of 3, half of 4, two-thirds of 5, the whole of 6–7 and 10, and a proximal dot on each side of 8, black. (*c*) Apical fourth of 3–4, third of 5, three-fourths of 6, whole of 7 and 10, and a longitudinal stripe on either side of distal half of 8, black. (*d*) Apical fourth of 3–4, one-third of 5, three-fourths of 6, whole of 7 and 10, and a longitudinal stripe on each side of the whole length of 8, black; the stripes are connected by an apical ring, their proximal ends show a tendency to be connected, being extended transversely, and there is a median dorsal dot between the extensions. (*e*) Another specimen lacks the dorsal dot and apical ring.

ENTOMOLOGICAL NEWS.

[The Conductors of ENTOMOLOGICAL NEWS solicit and will thankfully receive items of news likely to interest its readers from any source. The author's name will be given in each case, for the information of cataloguers and bibliographers.]

To Contributors.—All contributions will be considered and passed upon at our earliest convenience, and, as far as may be, will be published according to date of reception. ENTOMOLOGICAL NEWS has reached a circulation, both in numbers and circumference, as to make it necessary to put "copy" into the hands of the printer, for each number, three weeks before date of issue. This should be remembered in sending special or important matter for a certain issue. Twenty-five "extras," without change in form, will be given free, when they are wanted; and this should be so stated on the MS., along with the number desired. The receipt of all papers will be acknowledged.—ED.

PHILADELPHIA, PA., JUNE, 1901.

We publish this month some letters received in regard to the shipping of insects, because we believe they will have a good effect and call attention to the great carelessness of American entomologists in regard to entomological technic. It is true that we will always have the careless and slipshod collector as well as those that are careful and neat; but the careless can learn and improve, and the average condition of collections may be raised to a higher standard. To be personal in illustration, we wish that all Coleopterists could see the collection of Mr. H. W. Wenzel of Philadelphia, and all Lepidopterists the collection of Dr. Strecker of Reading. Many persons, however, do excellent work in entomology who have not the time to look after details.

We wish to call attention to the valuable address of the President of the Entomological Society of London.*

Is is full of strong, common-sense points in regard to descriptions, types, orthography, etc., and should be of interest to all entomologists.

I RAISED *Thecla martealis* this season from full grown larvæ at Miami, Florida. The food plant was a tropical shrub *Trema micrantha*, the larva a dull green with no markings, the whole upper surface covered thickly with short bristle-like hairs of pure white, giving the larva a frosted appearance.—ANNIE TRUMBULL SLOSSON.

* Trans. Ent. Soc. Lond., pt. v, 1900.

Entomological Literature.

COMPILED BY P. P. CALVERT.

Under the above head it is intended to mention papers received at the Academy of Natural Sciences of Philadelphia pertaining to the Entomology of the Americas (North and South). Articles irrelevant to American entomology will not be noted. Contributions to the anatomy, physiology and embryology of insects, however, relating to American or exotic species, will be recorded. The numbers in HEAVY-FACED TYPE refer to the journals, as numbered in the following list, in which the papers are published; * denotes that the paper in question contains descriptions of new North American forms. Titles of all articles in foreign languages are translated into English; usually such articles are written in the same language as the title of the journal containing them, but when such articles are in other languages than English, French, German or Italian, this fact is indicated in brackets.

2. Transactions of the American Entomological Society, xxvii, Philadelphia, May, '01.—**4.** The Canadian Entomologist, London, Ont., May, '01.—**5.** Psyche, Cambridge, Mass., May, '01.—**6.** Journal of the New York Entomological Society, March, '01, Rec'd. April 29.—**9.** The Entomologist, London, May, '01.—**11.** The Annals and Magazine of Natural History, London, '01.—**12.** Comptes Rendus. L'Academie des Sciences, Paris, '01.—**21.** The Entomologist's Record, London, April 15, '01.—**22.** Zoologischer Anzeiger, Leipsic, April, 15, '01.—**35.** Annales, Société Entomologique de Belgique, xlv, 4, Brussels, April 30, '01.—**36T.** Transactions, **36P.** Proceedings, Entomological Society of London.—**45.** Deutsche Entomologische Zeitschrift, 1900, heft ii, Berlin, Feb., '01.—**46.** Tijdschrift voor Entomologie, xliii, 3-4, The Hague, April 5, '01.—**50.** Proceedings, United States National Museum, Washington, '01.—**54.** Journal, Royal Horticultural Society, xxv, 3, London, April, '01.—**74.** Naturwissenschaftliche Wochenschrift, Berlin, '01.—**79.**—La Nature, Paris, '01.—**93.** Rendiconti, Reale Accademia dei Lincei, Rome, April 21, '01.—**146.** The Entomological Student, Philadelphia, May 15, '01.

THE GENERAL SUBJECT.—Bohn, G. L'Evolution du pigment, Scientia. Biologie No. 11, Febr., '01. [Paris ?].—**Brandicourt, V.** Insects: resistance to death by decapitation or submersion, **79,** May 4.—**v. Dalla Torre, C. W.** [Literature on] Relations between plants and animals, fertilization, injuries to the plant world by animals, etc., for 1898, Just's Botanischer Jahresbericht, xxvi, ii, 3, Leipsic, '01.—**Dewitz, J.** Prevention of pupation in insect larvæ, fig., Archiv für Entwickelungsmechanik der Organismen, xi, 3-4, Leipsic, April 12, '01.—**Elwes, H. J.** Obituary notice of the late Dr. Otto Staudinger, **36P,** 1900, pt. v, April 19, '01.—**Verrall, G. H.** The President's address (descriptions and types, orthography in entomology), **36P,** ibid.

ECONOMIC ENTOMOLOGY.—Anon.—The malaria expedition to Nigeria, Science, New York, April 19, '01.—**Banks, N.** Bibliography of the more important contributions to American Economic Entomology. Part vii. The more important writings published between Dec. 31, 1896, and Jan. 1, 1900. U. S. Dep't. of Agriculture, Division of

Entomology, Washington, '01. 100 pp. + 13 pp., index.—**Billotte.** Phylloxera in Lorraine, Memoires, l'Academie de Metz, cxxxix année, 1898-99. 1900.—**Bordage, E.** On some [insect] parasites of the coffee-tree in Reunion, Bulletin, Société Nationale d'Acclimatation de France, Paris, Mar., '01.—**Fernald, C. H.,** and **H. T.** Report of the entomologists, 13th Annual Report Hatch Exper. Sta., Massachusetts Agric. College, Boston, Jan., '01.—**Britton, W. E.** Experience with hydrocyanic acid gas in barn and greenhouse, On the banding of trees to prevent the fall cankerworm, Miscellaneous notes on insects and insecticides, and with **Jenkins, E. H.,** The protection of shade trees, figs., 9 pls. Report, Connecticut Agric. Exper. Station for the year ending Oct. 31, 1900, pt. iii. [Date and place of publication not given].—**Cartaz, A.** Trombidiosis, **79,** April 6.—**Cousins, H. H.** Fumigation with hydrocyanic acid gas, **54.**—**Felt, E. P.** 16th Report of the state entomologist on injurious and other insects of the State of New York, 16 pls. Bulletin 36, New York State Museum, Albany, Mar., '01; Illustrated descriptive catalogue of some of the more important injurious and beneficial insects of New York State, Bulletin 37 of same, Sept, '00.—**Fockeu, H.** The Potentillas, their vegetable and animal parasites, their galls, Revue Generale de Botanique, Paris, April 15, '01.—**Gillette, C. P.** Apiary experiments, 6 pls., Bulletin 54, Agric. Exper. Station, Agric. College of Colorado, Fort Collins, Colo., May, '00. Rec'd. May, '01.—**Hollrung, M.** Jahresbericht über die Neuerungen und Leistungen auf dem Gebiete des Pflanzenschutzes Zweiter Band: Das Jahr 1899, Berlin. Paul Parey, 1900.—**Laveran.** *Anopheles* and its role in the propagation of paludism, Comptes Rendus, Société de Biologie, Paris, April 20, '01.—**Newstead, R.** The currant bud-mite or currant gall-mite (*Phytoptus ribis* Westw.), figs., **54.**—**Noé, G.** Propagation of blood filariæ solely by the puncture of mosquitos (3rd preliminary note), **93.**—**Rogers, L.** The transmission of the *Trypanosoma Evansi* by horse flies, and other experiments pointing to the probable identity of Surra of India and Nagana or tsetsefly disease of Africa, Proceedings, Royal Society, London, No. 444, May 4, '01.—**Sajo, K.** Weevils injurious to rye, Zeitschrift für Pflanzen-krankheiten, xi, 1, Stuttgart, March 16, '01—**Sanderson, E. D.** Report of the Entomologist, many figs. Twelfth Annual Report, Delaware College Agric. Exper. Station for the fiscal year ending June 30, 1900. Newark, Del., '01.—**Smith, J. B.** Report of the Entomological Department of the New Jersey Agric. College Exper. Station for the year 1900, figs. Somerville, N. J. 1901. (N. J. Agr. Coll. Exper. Sta. Rep., pp. 477-572).—**Stephens, J. W. W.,** and **Christophers, S. R.** [The proposed site for European residences in the Freetown Hills, etc.]; **Daniels, C. W.** Observations on the *Anopheles* of British Central Africa during dry season; Distribution and breeding grounds of *Anopheles* in British Central Africa; Development of "crescents" in "small dark" *Anopheles*, Reports to the Malaria Committee of the Royal Society, fifth series, London, April 22, '01.—**Wilcox,**

E. V. Abstracts of recent papers, Experiment Station Record, xii, 9 (U. S. Dep't. of Agriculture), Washington, '01.

ARACHNIDA.—Banks, N. Some spiders and other Arachnida from Southern Arizona,* **50,** No. 1223.—**Cambridge, F. O. P.** On a collection of spiders from the Bahama Islands made by J. L. Bonhote, Esq.; with characters of a new genus and species of Mygalomorphæ,* 1 pl., **11,** April.—**Kræpelin, K.** Palpigradi and Solifugæ, 118 figs., Das Thierreich, Lieferung 12, Berlin, Feb., '01.—**Piersig, R.** Remarks on the genus *Arrhenurus* Dugés, **22.—Simon, E.** Descriptions of new Arachnids of the family Attidæ, **35.—Wagner, W. A.** The aquatic spider *Argyroneta aquatica*, its industry and its life: material for comparative psychology, figs., 1 pl. [In Russian, French summary], Bulletin, Société Imperiale des Naturalistes de Moscou, 1900, Nos. 1 and 2.

MYRIOPODA.—Ludwig, F. Phosphorescent myriopods and the luminous rotting of wood, Centralblatt für Bakteriologie, Jena, April 12, '01.—**Nemek, B.** On the phylogeny of some Diplopod families, **22.—Rossi, G.** On the subintestinal nervous system of Myriopods, figs., **93.**

ORTHOPTERA.—Hartline, D. S. A plague of walking sticks [*Diaphomera femorata*], fig., Popular Science News, New York, April, '01.—**Morse, A. P.** New North American Orthoptera,* **4;** Variation in *Tridactylus*, figs., **5.—Petrunkewitsch, A.,** and **von Guaita, G.** On sexual dimorphism in the sound-producing apparatus of Orthoptera, 4 pls. Zoologische Jahrbücher, Abtheilung fur Systematik, xiv, 4, Jena, Mar. 18, '01.—**Rehn, J. A. G.** Remarks on some Mexican Orthoptera, with descriptions of new species,* **2.**

NEUROPTERA.—Imhof, O. E. Antennæ of Odonata, Biologisches Centralblatt, Erlangen, Apr. 15, '01.—**Williamson, E. B.** The subgenus *Stylurus* Needham: Selys' groups vi and vii of the genus *Gomphus* (Odonata), and on the postanal cells in the latter, 2 pls., **2.**

HEMIPTERA.—Caudell, A. N. The genus *Sinea* of Amyot and Serville,* 2 pls., **6.—Cockerell, T. D. A.** Contributions from the New Mexico Biological Station: xi, new and little known insects from New Mexico* [Coccidæ, Hymenoptera], **11,** April; The coccid genus *Saissetia*,* **146.—Coutière, H.,** and **Martin, J.** On a new subfamily of marine Hemiptera, the Hermatobatinæ, **12,** April 29.—**Distant, W. L.** Rhynchotal notes, ix, Heteroptera, fam. Coreidæ,* **11,** May.—**Hansen, H. J.** On the morphology and classification of the auchennorrhynchous Homoptera, **9.—King, G. B.** Two new species of *Pulvinaria*,* **4;** *Pulvinaria innumerabilis* Rathv., **5.—Porta, A.** The secretion of foam in *Aphrophora*, critical note, Monitore Zoologico Italiano, Florence, Mar., '01.—**Reed, E. C.** Synopsis of the Hemiptera of Chile (cont.), Revista Chilena de Historia Natural, Valparaiso, Feb., Mar., '01.—**Schouteden, H.** The genus *Siphonophora* C. Koch, **35.**

COLEOPTERA.—Arrow, G. J. Remarks on secondary sexual differences in Rutelid Coleoptera, with descriptions of some new forms, figs., **11,** May.—**Champion, G. C.,** and **Chapman, T. A.** Observa-

tions on some species of *Orina*, a genus of viviparous and ovo-viviparous beetles, 2 pls., **36T,** 1901, pt. 1, April 30.—**Ehrmann, G. A.** Notes on the discovery of *Pinodytes hamiltonii* Horn, **146.**—**Harris, E. B.** Cicindelidæ of Mt. Desert, Maine, **6.**—**Horn, W.** Seven new Cicindelidæ, **45.**—**Jacoby, M.** Descriptions of four new species of *Disonycha* (Coleoptera Phytophaga, fam. Halticidæ),* **9.**—**Lesne, P.** Sexual variation in the males of certain Coleoptera, family Bostrichidæ, periodic pœcilandry, **12,** April 1.—**Ohaus, F.** Revision of Parastasiidæ, **45.**—**Schenkling, S.** New American Cleridæ,* **45.**—**Schwarz, O.** New exotic Elateridæ,* **45.**—**Weise, J.** Correction of observations on the food of our Coccinellidæ, **45;** Two new Cassidinæ, **45.**

DIPTERA.—**Chagnon, G.** Preliminary studies on the Syrphidæ of the province of Quebec, Naturaliste Canadien, Chicoutimi, Quebec, April, '01.—**Coquillett, D. W.** New Diptera in the U. S. Nat. Mus.,* **50,** No. 1225; A systematic arrangement of the families of the Diptera, **50,** No. 1227.—**Hough, G. de N.** South American Muscidæ in the collection of S. W. Williston, 2 pls., Bulletin, University of Kansas, i, 4, Lawrence, July, '00.—**de Meijere, J. C. H.** On the metamorphosis of *Callomyia amœna* Meig., 1 pl., **46.**—**Rothschild, N. C.** Notes on *Pulex canis* Curtis and *P. felis* Bouché, 1 pl., **21.**

LEPIDOPTERA.—**Bacot, A. W.** Larvæ of *Lasiocampa quercus* and its varieties, etc., and of cross-pairings between these races, **21.** **Chapman, T. A.** The cry of *Acherontia atropos*, **21.**—**Daecke, E.** Notes on the habits of *Thecla damon*, **6.**—**Druce, H.** Descriptions of some new species of Lepidoptera from East Africa and tropical America,* **11,** May.—**Dyar, H. G.** Life histories of North American Geometridæ, xxii, **5;** Descriptions of some Pyralid larvæ from southern Florida,* **6;** An apparently new Tortricid from Florida,* **6,** Note on the larvæ of *Arctia intermedia*, **6.**—**Fernald, C. H.** Marginal wing-bristles in Lepidoptera, **9.**—**Fletcher, J.**, and **Gibson, A.** The life-history of the greenhouse leaf-tyer (*Phlyctænia ferrugalis* Hbn.), **4.**—**Frings, C.** Temperature experiments in the year 1900, Societas entomologica, Zurich-Hottingen, May 1, '01.—**Hampson, G. F.** On some teratological specimens of Lepidoptera, Entomologists' Monthly Magazine, London, May, '01.—**Moore, F.** Lepidoptera Indica, pt. xlix, London, Lovell Reeve & Co., '01; Recd. April 16. [Vol. v, pp. 1-24, Nymphalinæ, groups Melitænina, Eurytelina. Pls. 379-384].—**de Nicèville, L.** Cannibalism among caterpillars, **4.**—**Poling, O. C.** Some recent work in the genus *Catocala*,* **4.**—**Prout, L. B.** Sesiidæ or Ægeriidæ, **21.**—**Schaus, W.** New species of Heterocera from tropical America, i*, **6.**—**Scudder, S. H.** A courageous butterfly, *Œneis semidea*, 1 pl., **5.**—**Seifert, O.** Life-history of *Platysenta videns*, **6.**—**Smith, J. B.** Types and synonymy, **4.**—**Snellen, P. C. T.** On Pyralidæ [in Dutch], 3 pls., **46.**—[**Thomann, H.**] Symbiosis between *Lycæna argus* and *Formica cinerea*; Insekten Borse, Leipsic, April 11, '01.—**Tutt, J. W.** Migration and dispersal of insects: Lepidoptera, **21.**

HYMENOPTERA.—Bignell, G. C. Inquiline Cynipidæ, shape of galls, **21.—Bradley, J. C.** The Evaniidæ of America north of Mexico, **146.—Cockerell, T. D. A.** See Hemiptera.—**Dahl, F.** The life of the ants of the Bismarck Archipelago from personal observations, comparatively presented, Mitteilungen aus dem Zoologischen Museum in Berlin, ii, 1, '01.—**Dickel, F.** The present standpoint of my development theory of the honey bee, **74,** April 21.—**Forel, A.** Mexican ants collected by Prof. W. M. Wheeler,* **35;** Concerning the classification of ants, **35.—Kieffer, J. J.** Revision of the Eucœlinæ (Hymenopt. Cynipidæ), Feuille des jeunes Naturalistes, Paris, May 1, '01.—**Ludwig, N.** On the orientation sense and the memory of bees, **74,** April 7.—**Mayr, G.** The producer of Sodom's apples, Wiener Entomologische Zeitschrift, xx, iv, Apr. 25, '01.—**Morice, F. D.,** and **Cockerell, T. D. A.** The American bees of the genus *Andrena* described by F. Smith (cont.),* **4.—Sladen, F. W. L.** A scent organ in the bee, the scent produced forms a means of communication between the members of a swarm or colony, figs., British Bee Journal, London, April 11, 18, '01.—**Smith, J. B.** Notes on some digger bees, i, **6.—Thomann, H.** See Lepidoptera.—**Titus, E. S. G.** On some bees of the genus *Augochlora,** figs., **4.**

Notes and News.

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE.

How far may a Mosquito travel?—While the subject of mosquitoes is a popular one, perhaps a little note will not be amiss regarding one feature of them in this arid region. The country is too dry for mosquito propagation, and, with an average of perhaps one light shower a year, only the scantiest and hardiest of vegetation can exist. The Colorado River is the nearest breeding place to our mining camp, and from it the mosquitoes occasionally find their way here between April and July, the time of greatest abundance. The nearest point on the river from here is twelve miles to the southeast, where our pumping station is located. Yuma, which is eight miles farther up the river, is twenty miles away. Farther north, the river makes a large bend to the east until it is forty miles away; but, in the backward curve, it again comes within twenty-two miles, this time on the northeast of us. Winds that blow from the east and northeast are the ones that bring the mosquitoes—not an occasional one, but in numbers to worry the most stoical. A high wind brings very few if any, but a steady gentle breeze of two or three days' duration is the most prolific. The mosquitoes may scarcely arrive here before a breeze sets in from the opposite direction and starts them on the return trip, but are more likely to remain from a few days to

half a score before the counter wind drives them away. In the spring there is seldom a southeast wind (blowing from our nearest point on the river), but when there is it brings the mosquitoes in abundance and sooner than from the northeast.

The most of the mosquitoes here, then, must have traveled over a hot, dry, barren desert waste for at least 22 miles, and many of them probably considerable farther to reach any place even as inviting as this. How much farther into the desert they may journey can only be conjectured, but I have found them at least 4 miles beyond here.

The genus *Anopheles* is probably not found along the Colorado. At least its attendant malaria is unknown to this region.—G. C. Davis, Ogilby, Cal.

The New Mexico Biological Station.—The Biological Station was founded as an independent institution at Mesilla in 1896. In 1899 it was moved to Las Vegas, and held a successful summer session in the New Mexico Normal University. A brief session was also held in 1900. The students in attendance have been mostly public school teachers. The results of the research work have been published in the *Annals and Magazine of Natural History*.

The Station will now be conducted as a part of the work of the biological department of the Normal University. The session of 1901 will commence on the first of June. A course in Nature Study will be offered to public school teachers, and opportunities will be afforded for research work along a number of different lines.

Las Vegas offers excellent opportunities for biological work. The summer climate is very good, and at no time is the heat excessive, as it is at lower altitudes in New Mexico and other parts of the Southwest. The altitude is about 6400 ft., with mountains close by rising above 11,000 ft.

Four distinct life-zones—the Upper Austral, the Transition, the Canadian and Hudsonian—can be studied within 35 miles of Las Vegas. It results from this that the local fauna and flora are extremely rich in species; in the Hudsonian Zone are forms of circumpolar distribution, and others ranging to Alaska, though not to Asia or Europe; in the Canadian Zone we find types inentical with those of the mountains of the Northern States and of Colorado; in the Transition a varied assemblage typical in part of the foothill region of the Rocky Mountain Range; in the Upper Austral many species characteristic of the arid southwest, some ranging far southward and westward. With all this comes a certain percentage of local or endemic types, just how numerous further research must determine. Such are the snail *Ashmunella thomsoniana porterae* and the magnificient butterfly *Argynnis nitocris nigrocærulea*, both found in Sapello Canon.

The Gallinas River, flowing through Las Vegas, contains a crawfish (*Cambarus gallinus*), described as new last year, some interesting fishes (*Leuciscus* and *Rhinichthys*), and a variety of acquatic insects, algæ, etc.

The Hot Springs, six miles away, contain some peculiar organisms, which have not yet been sufficiently examined.

In the Arroyo Pecos, and elsewhere in the immediate vicinity of the town, is an immense alluvial deposit of pleistocene age, containing innumerable remains of mollusca and occasional mammalian fragments.

Special facilities are offered to students of wild bees (Apoidea), the available collections and literature being very extensive. Facilities are also offered for the study of Coccidæ and other groups of insects. Students should, if possible, bring their own microscopes, slides, forceps and other accessories.—For further information apply to T. D. A. COCKERELL, East Las Vegas, N. M.

CONTRIBUTIONS FROM THE N. M. BIOLOGICAL STATION.

The following contributions have been published in Annals and Magazine of Natural History :

1. Descriptions of New Bees collected by Prof. C. H. T. Townsend in the State of Vera Cruz. By T. D. A. Cockerell. Oct., 1896.
2. On a Collection of Diptera from the Lowlands of the Rio Nautla in State of Vera Cruz. By C. H. T. Townsend. January, July, September, 1897.
3. The Bees of the Genus *Colletes* found in New Mexico. By T. D. A. Cockerell. January, 1897.
4. Diptera from the Sacramento and White Mountains in Southern New Mexico. By C. H. T. Townsend, February, 1897.
5. Some New Hymenoptera from the Mesilla Valley, New Mexico. By T. D. A Cockerell. April, 1897.
6. The New Mexico Bees of the Genus *Heriades*, and a New *Halictus*. By T. D. A. Cockerell. August, 1897.
7. Observations on Bees, with Descriptions of New Genera and Species. By T. D. A. Cockerell and Wilmatte Porter. December, 1899.
8. The New Mexico Bees of the Genus *Bombus*. By T. D. A. Cockerell and Wilmatte Porter. November, 1899.
9. On Certain Genera of Bees. By T. D. A. Cockerell and W. P. Cockerell. January, 1901.
10. Observations on Bees Collected at Las Vegas, New Mexico and in the Adjacent Mountains. By T. D. A. Cockerell. Jan., 1901.

ANSWERS TO DR. SKINNER'S NOTE IN THE MAY NEWS, PAGE 158, IN REGARD TO SHIPPING INSECTS.

1. Pinning the insects in agave pith may corrode the ends of the pins and may cause, especially when the box has been a long time on its way, breaking of the pins and more or less destruction of the contents of the box

2. The inside box ought to be light, so as to put as little pressure as possible on the cotton that surrounds it ; the heavier the inside box, the

stronger and more jerky the vibrations of the box and the easier loosing of the needles. The amount of cotton put between the two boxes was *far too much*; this quantity of cotton could not work as an elastic buffer between the outer and inner box.

The contents of the box should have been written on the outer box, and also the address of the sender.

I think that the contents of the box must have been badly damaged, especially if Lepidoptera or Diptera were in it.—DR. GEO. W. BOCK.

I EXPECT the insects were damaged, because of too much cotton, jammed in tight so that the inner box could not move. Under these circumstances the insects would be liable to move, on the same principle as the second of two billiard balls in contact, the first being hit; or the inner table of the skull, sometimes fractured by a blow, as by a spent bullet on the outer table.—T. D. A. COCKERELL.

Replying to conundrums published on p. 158, vol. 12 of ENT. NEWS, I should think

1st. "The condition of enclosed insects" would resemble what "we boys of the 60's" called a "hishy hashy h—l fired stew," composed of salt pork, fresh beef, hard tack, white beans, green grapes, potatoes and any other ingredients we could lay our hands on—all stewed together.

2nd. If any insects escaped injury, it must have been through *lack of cotton*. With a good heavy caulking chisel and a sledge I believe more than six ounces could have been forced into the space between the boxes. The outer box should be strongly nailed before beginning to caulk, and care should be exercised not to *jar* the insects with the sledge while caulking, as the antennæ are very fragile and easily jarred off.

Perhaps molten lead poured in to fill the space between the boxes would give the whole thing a rigidity that could not be obtained with cotton, however well packed. I have never tried it, but imagine it might give better results; only I have not yet decided how to *unpack* it, without jarring it too much; possibly it could be melted off.

I imagine that box must have been sent you by the man who "shoots" *Catocala*, under the impression that specimens who can survive shooting are safe under any conditions.

Of the many hundreds of specimens I exchanged this winter expanded, via. express, not one specimen was destroyed.

I use pasteboard boxes, packed in 5 ct. wooden basket, with excelsior, 100 to 150 specimens packed ready for shipment weighing 2 lbs.—F. A. MERRICK.

THE insects were damaged, as six specimens were rolling around in the box and playing ten pins with the others, and bowling off antennæ, legs, etc. If pith is used to line boxes, the boxes should be just deep enough to prevent the point of the pin from ascending to the surface of the pith. The express company in this particular case did not know but

what the box contained pig iron or bars of lead. If the outer box is strong there is no necessity for having the inner box very heavy. We often get boxes here that show that the senders think that the more cotton or excelsior they use between the boxes the greater their safety, and if they had a steam hammer handy they would doubtless use that to get more in. Very few people in this country seem to understand how to properly pack insects for transportation. Our experience here has been a sad one when we have loaned specimens for study. Our collection of Sesiidæ was destroyed in this way.—HENRY SKINNER.

Doings of Societies.

A regular stated meeting of the Feldman Collecting Social was held May 15th, at the residence of Mr. H. W. Wenzel, 1523 South 13th Street. President Mr. Charles W. Johnson in the chair.

Professor Smith again spoke about the mosquitoes which he had previously mentioned and stated the following new facts: All the specimens from the pitcher plants were *Ædes* instead of *Culex* as he first thought, and therefore all of the preceding observations should be referred to *Ædes*. The two species which he raised from his pitcher plants were *Ædes fuscus* and *A. sapphirinus*. These are both new to New Jersey and have only been found in the pitcher plants. He spoke of the larvæ of an *Ædes* which he examined, which had two anal flaps showing a complete network of tracheæ and which up to the last stage were used in breathing. These larvæ are able to stay under water some time if the water is clear, but if it is foul or muddy they must come to the top frequently, and if the water becomes too foul the larvæ die. He also spoke of another lot of mosquito larvæ he had received, which are only found in spring holes. This one is different in all stages from *Ædes*, and he thought that they must have passed the winter in the larva state. They are very lively, going to the bottom at the least sign or shadow, this being a protection for them, as they are yellow; and when they go to the bottom it is difficult to distinguish them from the mud which is there. They also have to protect themselves from the larva of many other insects which are found in these spring holes, while the larvæ of *Ædes* are protected by the pitcher plants in which very few

insects are found. Out of about sixty specimens of *Ædes* he did not think he had a single male unless they resemble the females very closely.

He spoke about the different resting positions of mosquitoes, and stated that it was different in each genus, and also noted that the spines on the larvæ were different in each genus, and they might be used as a means of classification. He said it would be a good thing for entomologists to take note of the insects found in pitcher plants, so that some knowledge could be had of the inhabitants. He spoke of the lepidopterous larva which spins a web, which is so perfectly water proof that it prevents any water from getting in, and when the water dries up that is already there the larvæ proceed to eat into the plant.

Mr. Wenzel spoke again about the subaquatic Pselaphids mentioned at the last meeting. He said that down at Anglesea, New Jersey, the tide has been very high, and the place where he had collected these before was covered with about a foot of water, but the next morning at low tide he went there and under a large log which he turned over found a large number of Pselaphids which did not seem to be effected by the submersion. Some of these were found in at least four inches of water. Mr. Johnson said this might account for the distribution, as they could cling to logs under the water and be carried to different parts of the coast.

Mr. Wenzel recorded *Dromius atriceps* taken at Anglesea, N. J., May 5, 1901, as a new species for New Jersey. He spoke about *Cychrus elevatus* which he had taken around Angelsea. The eleven specimens which were taken were unicolorous, while the inland species have a metallic lustre.

Dr. Skinner stated that at Westville, New Jersey, May 5th, he found quite a number of specimens of *Acmæodera culta* in which all the maculations were white, while those in the collections he had examined were orange. Mr. Wenzel said he thought they most likely turn yellow within a short time after death. Mr. Wenzel also mentioned finding this species in the oak, and said that after reaching the adult stage they are found on different plants and said this was the case in a number of other species.

Mr. Daecke spoke about a spider he had received which was running over the water, and while being chased it went under the water a number of times. He also showed a box of odd specimens which he had collected recently, and among which were some very good things, especially the following: *Neurocordulia uhleri*, a female of which he had taken at Millville, New Jersey, April 29th, and on May 5th had seen about twenty-five, eight of which he captured. The date of their appearance seems to run from April 29th to May 5th. Only two specimens of this species were previously known. He recorded *Tetragoneuria spinosa* taken at Clementon, N. J., May 3rd, as new to New Jersey; also *Zabrotes subnitens* from Manumuskin, N. J., May 5th, which is a very rary species.

WM. R. REINICK, *Secretary*.

The fifteenth annual meeting of the Harris Club was held at 35 Court Street, Boston, on the evening of Friday, March 15th. Interesting exhibits of cocoons of different types were made by Messrs. Morse, Low and Hall. Devices for protecting collections from the entrance of museum pests were discussed at length. Mr. Low showed an aberrant specimen of *Attacus cecropia*, in which the outer third of each wing is of a creamy buff, without the usual dark markings.

The sixteenth regular meeting was held at the same place on Saturday, April 13th. Messrs. Low, Higbee and Newcomb displayed interesting series of variant Lepidoptera. Mr. Denton showed a folding net of new design. A committee was appointed to draw up a set of directions for mounting insects, in order to secure uniformity in the club collections.

Above notes are taken from the records of A. P. Hall, temporary secretary. W. L. W. FIELD, *Secretary*.

A meeting of the American Entomological Society was held April 25th, Dr. P. P. Calvert, President, in the chair. Fourteen persons present. Mr. Wenzel exhibited specimens of the wood of *Rhus typhina* (staghorn sumach), and *Rhus radicans* (poison ivy). These pieces of wood were infested with two species of *Scolytus*. The species found in the staghorn sumach penetrates the bark and the pith, while the one in the poison

ivy infests the bark only. The species have not been determined with certainty by the speaker. He also collected *Dysmerus basalis* Casey—was found in the poison ivy. This is the first record for this vicinity. Dr. Calvert said the genus *Argia* was, perhaps, the most difficult to study among the Odonata. It occurs in North and South America, but the headquarters is found in Tropical America. De Selys and Hagen in 1865 published a paper on the genus. They used in classification the modifications of the superior sector of the wing. The difference in these sectors was illustrated by the speaker, who said he had a large amount of material for study and he found the characters laid down by De Selys and Hagen had failed entirely. The appendages were considered to be the only reliable characters to use for classificatory purposes. The colors were also investigated and were thought to be of considerable value where large series were available for study. Mr. Wenzel spoke of the distribution of Pselaphidæ and Scydmænidæ on Fivemile Beach, New Jersey. The difference between the dune fauna and the salt meadow was explained. The dunes make a line of demarcation between the faunæ. Some species were found on logs submerged in water.

HENRY SKINNER, M. D., *Secretary.*

A regular stated meeting of the Newark Entomological Society was held Sunday, April 14th, 3 p. m., at Turn Hall, fifteen persons being present, President Buchholtz in the chair.

The members present voted to hold the next meeting in May, outdoors, and Paterson was the the place selected.

Feralia jocosa was reported as more plentiful than ever, the season being two weeks in advance of usual time.

GEORGE STORTZ, *Secretary pro tem.*

OBITUARY.

Mr. T. G. Priddey died suddenly on April 25th at his home in Toronto, Canada. He was in his 56th year, and was a well-known collector of insects, particularly Lepidoptera. He had planned another collecting trip to South Florida this season.

We regret to announce the death of Prof. Otto Lugger, State Entomologist of Minnesota.